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Vitiligo and Diabetes Mellitus

SIR.—A close clinical association has been found between vitiligo and diabetes mellitus; Dawber (1968) found that 4·8% of diabetics have vitiligo, whilst other reports have demonstrated a high incidence of diabetes mellitus in the families of patients with vitiligo (Cunliffe *et al.*, 1968; Bleehen, Personal Communication). In patients with both diabetes and vitiligo (Dawber, 1968) the latter preceded the onset of diabetes in many patients suggesting that vitiligo might be associated with a "pre-diabetic" tendency. We have therefore investigated a group of patients with vitiligo having no personal or family history of diabetes in order to establish whether they are in fact pre-diabetic.

No test of carbohydrate intolerance exists to enable one to detect "prediabetes" though "latent" diabetes can be diagnosed by the glucose tolerance test (with or without prednisone). Vallance-Owen (1958) using an isolated rat diaphragm technique has demonstrated insulin antagonism associated with the albumin fraction of plasma proteins (synalbumin antagonism). The indications are that excess synalbumin antagonism (synalbumin positive) can be used as a marker of whether an individual is constituted as a diabetic, irrespective of whether carbohydrate intolerance is present.

Using this method we have assessed insulin antagonism in 21 patients with vitiligo; 13 were synalbumin positive. Six out of 28 normal controls studied previously were positive (Vallance-Owen and Aston, 1963), this being in accordance with an incidence of 20–25% found in the general population (Vallance-Owen, 1969). The high incidence in the vitiligo group is statistically significant ($P < 0\cdot001$).

Previous studies have demonstrated a close association between vitiligo and pernicious anaemia, thyrotoxicosis, myxoedema and Addison's disease whilst in patients with vitiligo having no evidence of these diseases, auto-antibodies against the thyroid and adrenal glands and gastric parietal cells have been found in high incidence (Dawber, 1970). Our results in the present study suggest that vitiligo is closely associated with the pre-diabetic state; it would seem advisable to keep these "at risk" patients with vitiligo under surveillance for diabetes mellitus.

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The Relationship Between Seborrhoea and Acne Vulgaris

SIR.—It is generally accepted that acne vulgaris is accompanied by clinical seborrhoea, and a direct relationship between sebum excretion rate (S.E.R.) and severity of acne was reported by Pochi and Strauss (1964) who studied 52 patients, and Cunliffe and Shuster (1969a) who studied 221 patients. Beveridge and Powell (1970) in a recent review of

the aetiological factors in acne have criticized the conclusion of Cunliffe and Shuster that S.E.R. and severity of acne are related on the grounds that many of their clinical subgroups contained too few subjects for such a generalization to be acceptable. They go on to quote their own study of 30 patients (Powell and Beveridge, 1970) which showed a poor correlation between acne severity and S.E.R. Fry and Ramsay (1966) in a study of 17 acne patients, have also reported no correlation between S.E.R. and acne severity.

This question is of great practical importance since the current search for a therapeutic agent to decrease sebum production in acne depends for its rationale on the premise that an increased S.E.R. is a major factor in the aetiology of acne.

We have now investigated the relationship in a further 87 subjects. The S.E.R. was measured by the method of Strauss and Pochi (1961) as modified by Cunliffe and Shuster (1969b) in unselected male and female subjects aged 10 to 25, of whom 25 had no acne and the remainder had facial acne of varying degrees of severity, graded 0-3. The grading was made subjectively by one author at the patients' first outpatient attendance and recorded before the S.E.R. was measured. The grading and S.E.R. measurements were performed before treatment was started but many of the moderate and severe cases had previously received treatment, including systemic tetracycline therapy, from the general practitioner and this may have tended to blur the distinction between the grades, leading to errors in classification. The acne was classified 0-4, where 0 was no acne and 4 was very severe acne, 2 and 3 being intermediate. This is the same classification as used in the previous study of Cunliffe and Shuster (1969a). There were no patients with grade 4 acne in the present study.

The results (Fig. 1) show clearly that S.E.R. is related to acne severity in both males and females. The correlation coefficients were highly significant; for the 33 males, $r = 0.71$ ($P < 0.001$) and for the 54 females, $r = 0.64$ ($P < 0.001$). The results of the present study differ from those previously reported by Cunliffe and Shuster (1969) in that they show a significant difference ($P < 0.05$) between the S.E.R.s in males and females with acne at each grade, but they confirm the previous conclusion of Strauss and Pochi (1964) and Cunliffe and Shuster (1969a) that the severity of acne vulgaris correlates well with the degree of seborrhoea. The significant correlation noted in these 3 independent studies, which include a total of 360 patients, outweighs the absence of a correlation in the 47 patients studied by Fry and Ramsay (1966) and Powell and Beveridge (1970). The reasons for the contrary findings by these workers are likely to be technical (Cunliffe and Shuster, 1969b). The present findings should put beyond dispute the fact that the severity of clinical acne is related to the increase in the S.E.R. Since an increased S.E.R. does not itself cause acne and since patients with a past history of acne maintain an increased S.E.R. (Cunliffe and Shuster, 1969a) the idea that acne is the consequence of the interaction of an increased S.E.R. and a second factor which operates in adolescence remains valid.

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Urea in the Treatment of Black Hairy Tongue

SIR.—Your review article on urea as a topical agent (Ashton *et al.*, 1971) prompts me to describe another use for urea: in the treatment of black hairy tongue. This condition is both clinically and histologically a filamentous hyperkeratosis of the lingual surface. A 40% solution of urea in water is applied to the tongue with a toothbrush, allowed to remain in contact with the surface for a few minutes, and then rubbed with the toothbrush. This treatment, repeated daily, is very successful in removing the hyperkeratosis.

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Skin and Vaccination Against Smallpox

SIR.—We were interested to see the paper by Drs Copeman and Banatvala on the Skin and Vaccination against Smallpox in the February 1971 number of the British Journal of Dermatology. Although this was obviously not meant to be a comprehensive article we were disappointed that no mention was made of the use of idoxuridine in the treatment of less extensive complications such as secondary lesions on the eyelid and in the eye and at other peripheral sites which result from mechanical transfer by the patient. We have also found this drug of value in giving relief to adults who have had a very severe primary take on the arm with axillary adenitis. The idoxuridine is applied as in herpes simplex and zoster infections (Juel-Jensen, 1969; Juel-Jensen *et al.*, 1970); the skin lesions are treated with 40% idoxuridine in dimethyl sulphoxide applied on lint for 3 days. If the eye is involved, or if there is a lesion on the eyelid or in any other site near the eye, 0.5% idoxuridine in ointment is applied 4 times a day to the eye (or 0.1% idoxuridine eye drops instilled hourly should be used).

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The Effect of Facial Nerve Paresis on Sebum Excretion

SIR.—We read with interest the paper by Burton *et al.* in the February 1971 issue as we have also investigated the possible influence of facial nerve paresis on sebum excretion. The stimulus for our investigation was provided by 2 patients who developed rosacea which showed hemifacial intensification on the side of a pre-existing neurological lesion—

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